INCIDENCE OF THE HOUSE SPARROW NESTING ON METAL POLES IN SEMI-ARID REGION OF SOUTH IRAQ

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The House Sparrow *Passer domesticus* (Linnaeus) is well known to nest in holes in dwellings and trees, or in the open in trees, close to human habitation. The records of the nesting on metal structures exposed to direct sun are limited. Summers-Smith (1967) considers lamp-posts as an unusual nest site. Allouse (1962) mentions of the House Sparrow nesting "on telegraph poles sometimes".

During the field trips conducted in south Iraq I have often come across the House Sparrow nesting on metal electric and telegraph poles since 1973. Earlier (1966-'72) I have found them nesting in similar situations in central Iraq. The present study was therefore, undertaken to examine the extent of the nesting behaviour of the House Sparrow on metal poles, particularly on the electric poles, exposed to sun.

The survey showed that the House Sparrow is commonly using metal poles exposed to direct solar radiation as breeding site.

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MATERIAL AND METHOD

The metal poles carrying power and telegraph lines on either sides of the Basrah-Baghdad highway between Basrah and Shafi (South Iraq) covering a distance of about 50 km were surveyed (Fig. 4) for the nesting of the House Sparrow. The area has over 650 electric poles and an almost equal number of telegraph poles. Two initial surveys (July and October, 1977) conducted helped me to sort out a plan for recording the data. Observations were made mostly in the forenoon by noting down the presence or absence of birds or nest on poles.

Fig. 4. Basrah-Shafi road where the incidence of the House Sparrow nesting on metal poles was studied (1977-'79).

A total of 54 surveys were made between March 1978 and July 1979, an average of five per month. No observations were made in August and January.

RESULTS

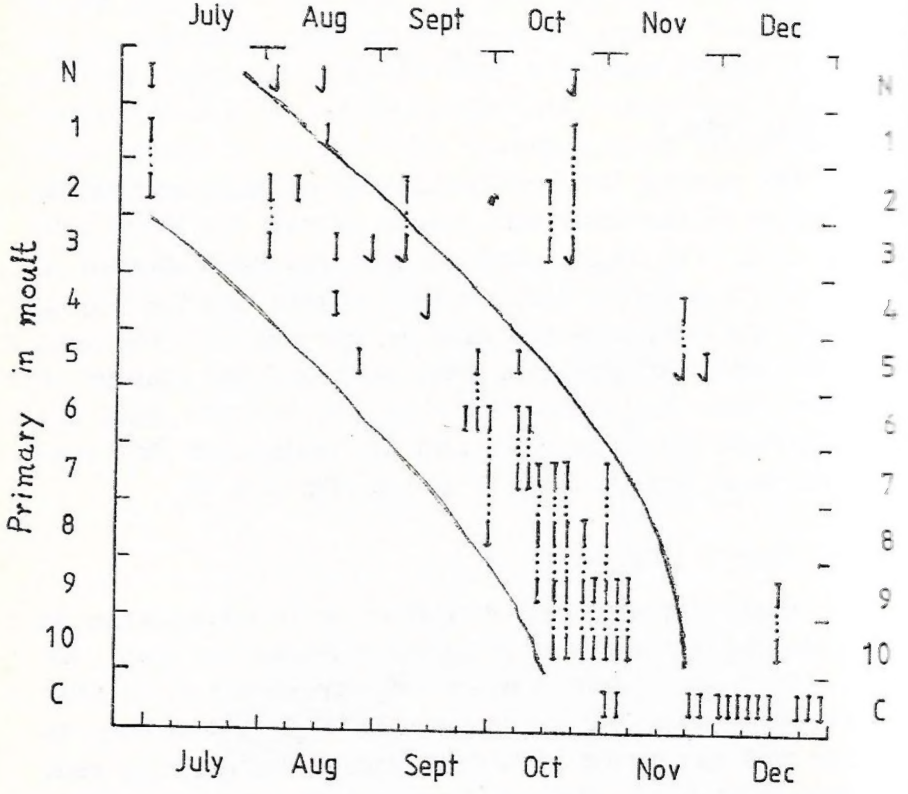
Electric Poles :

The nesting location in majority of cases was at the junction of the cross arm (which carried the lines) with the pole. The space available and the hold afforded at the junction varied with the type of pole and the way in which the cross arm was fixed on the pole. On the basis of the shape of pole and cross arm, and the manner in which both are joined together, the electric poles are categorized into five types and are designated for convenience as type A, B, C, D, and E (Fig. 5 & 6).

Pole Type A (Fig. 5A)

Particular attention was given to this type so as to obtain the frequency of occupation round the year. All the 197 poles contained nests. The frequency of occupation on a monthly basis is given in Fig. 1. February to June was the period of highest occupation reaching cent per cent in April. This was reduced to an average of 43 per cent (range 31-54) during the nonbreeding season (October to December).

One nest was the usual number in a pole. However, two or three poles were found to have been occupied by four birds each ; one pair on the left and another on the right side of the cross arm. These poles probably contained two nests.


July
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Pole Type B (Fig. 5B)

This pole was similar to A type ?ut for the different fixture of the cross arm. The pole-cross arm junction due to its fixture did not give any hold for the nest material and therefore none of the 153 poles of this type possessed nest or found to have been occupied by birds.

Pole Type C (Fig. 6C)

The hold provided by the pole-cross arm junction was slight compared to type A poles. The prevailing wind at the beginning of the breeding season together with the slight hold at the nesting site made the nest making real difficult and hence only those birds with dogged persistence succeeded in breeding in this type of pole. Occupation of these poles during 1978 is shown in Fig. 2. In the third week of March although birds were occupying nest sites no nests were present. Out of the 201 poles eighteen contained nest in June, the highest number for the year. This was reduced to six by the third week of November. Eventhough a few nests were present in early 1979, all were found lost by end of February. New nests were under making in the second week of March.

Partically all nests in these poles were lost (dislodged by wind) in winter or early spring and new nests had to be built for subsequent breeding.

Only one nest was found per pole except in one instance, where two were present one each on either side of the pole.

Pole Type D (Fig. 6D)

In this type the pole-cross arm junction did not furnish any hold for nest mnaterial. However, in 1178 one

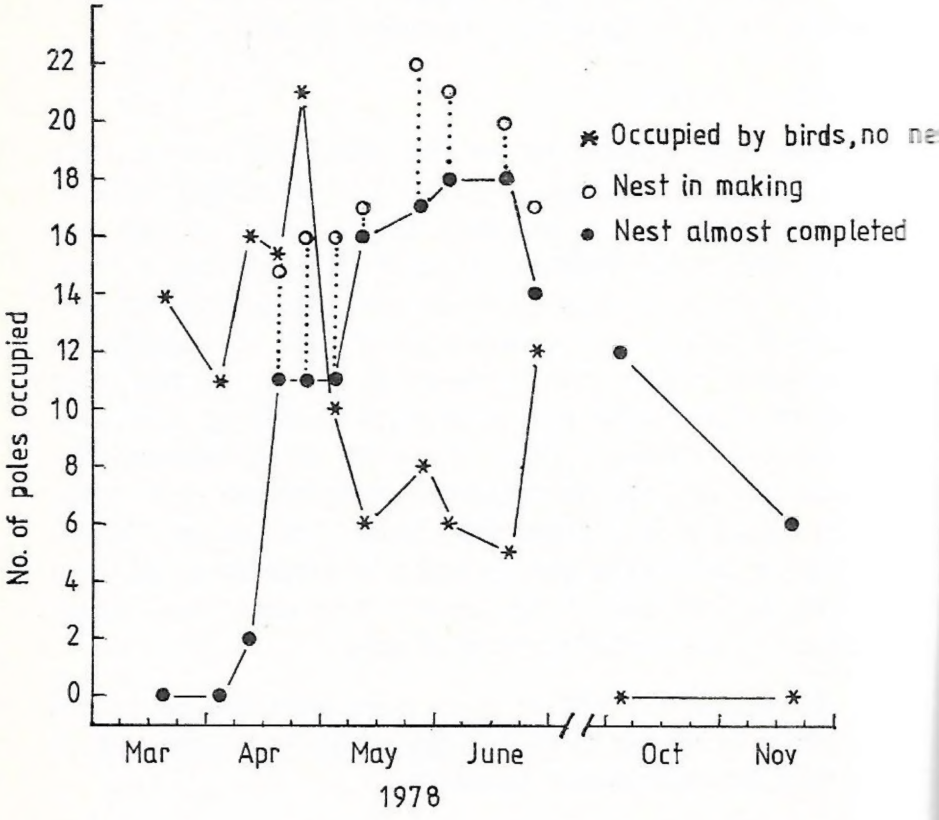

Fig. 2. Weekly frequency of occupation of pole type C.

pair managed with great difficulty to make a nest half way through (Fig. 7A), but was soon dislodged by wind. Except this no nest was found in the 72 poles.

Pole Type E (Fig. 6E)

This pole was made out of four angular beams welded together. The space available in between the beams along the pole was used for nesting from two metres upwards. All the 26 poles contained nests varying in number from one to six. These poles were found usually between poles of A and B type, after every ten or so of the A and B type.

In addition transformers (Fig. 8A), side lines (Fig. 8B), lamp shades, and any other structures which furnished a hold for nest material on electric poles were found to be utilized for nesting (Fig. 9).

Telegraph Poles :

No regular survey was done on telegraph poles. The most commonly used poles for nesting were those with open top, which lacked a cap (Fig. 10A). A good number of poles lacked the top cover. The sparrows used the tube for nesting. In such cases the nest appeared to be placed close to the top for in many cases the sitting bird's tail was projecting out from the top and the feeding was found to be made by the parent sitting on the rim of the tube. Upto 61 poles were found occupied by birds on 18 March 1979.

The other place appropriated for nesting was among the lines close to the pole (Fig. 10B) or on the cross arm (Fig. 10C). Such nests were not many, the highest number noted was fifteen (5 June 1979) and these nests were found lost in winter as in the case of electric pole type C

and the birds had to make new nests for the next breeding which they did.

Egg-laying Period :

The egg-laying period of the House Sparrow in Iraq is not well defined. Ticehurst *et al.* (1921 & 1926) record of young being fed on 19 April, and six and four eggs on 12 and 22 June respectively. Allouse (1962) mentions of a nest with four eggs on 4 July and two or more broods in a season.

My records are : Earliest date for laying : 24 & 26 March (Baghdad) and mid March (Basrah). Latest date for laying : 17, 18, 20, & 21 July (Baghdad) and mid June (Basrah). In both localities majority of the laying occurred between April and June. Number of broods reared : two common, three not unusual, four (once) ; none of the birds were marked for reasons of saftey of the bird, broods were reared one after another in the same nest.

Thus the egg-laying season of the House Sparrow in central and south Iraq lasts from mid March to third of July for a period of 4¼ months. The broods reared are usually two, three not uncommon, and four is also on record.

DISCUSSION

The Basrah-Shafi road, the area where the survey of the utilization of metal poles by the House Sparrow for nesting was made, passes between the marshes on the west and the Tigris river on the east. Both the marshes and the river lie at a distance varying from one half to two kilometres from the road.

The electric lines were drawn in the area around 1958 when the marshes reached close to the road at the highest water level in summer. Presumably at that time, if the nesting had started then, the area had a better and congenial climate for breeding activities. As flood protection the embankments were constructed around 1960 on the marsh side at a distance varying from one to two kilometres from the road. At present the road side is dry and normally from May to end of September the area experiences a hot to very hot climate (Fig. 3).

The proximity of human habitation varied from close to the road upto a distance of one to two kilometres. Except for a few instances the settlements are mostly confined to the river side of the road. The wind blowing from the marsh should play an ameliorative role in reducing the prevailing high temperature in summer. However, the windless hot days are not uncommon which could play havoc on breeding activities of the Sparrows. I did not make any study in this respect. It should be worthwhile to investigate the breeding biology of the House Sparrows on these poles so as to examine how the birds manage to breed in such a hot and hostile environment. I have heard the nestlings call from the pole nests even in June.

Irrespective of the harsh hot evironment, the House Sparrows appear to do well in their breeding activities as evidenced by the occupation of these nests even in June (90%) and July (52%) in the case of type A pole (Fig. 1). The eggs can probably tolerate a high temperature was indicated by Kainady (1977), who found eggs successfully hatching out in an ambient temperature ranging between 24.4 and 43.9° C presumably in the absence of female parent during the second half of incubation period. In

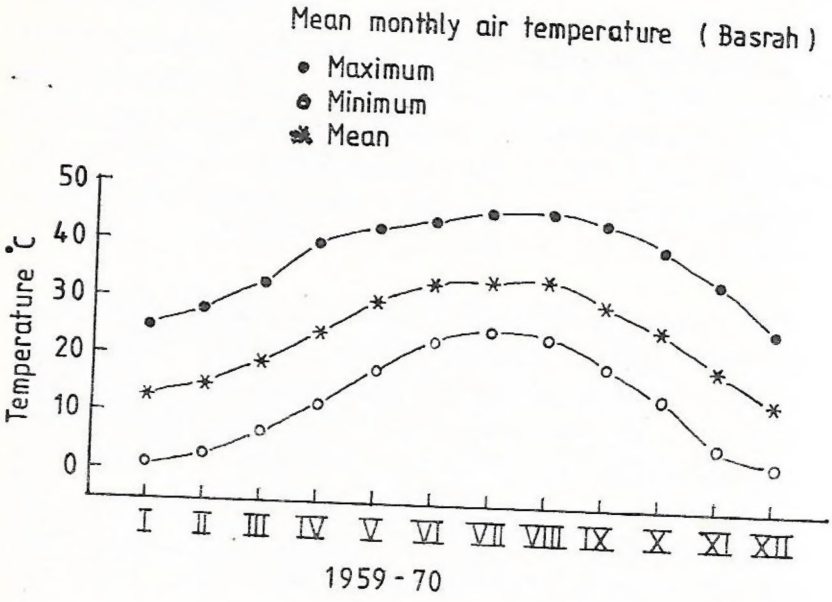

Fig. 3. Mean monthly maximum, minimum, and mean air temperatures as recorded in Basrah, based on 20 years record ending in 1970 (Lyubojevic and Al-Doori, 1972).

September the activity around the nest is reduced. An average of 43 per cent occupation of the poles during October to December period may mean possible use of nests as sleeping dormitories in winter as I have observed in one case in a nest box at my residence under observation from 1977 onwards.

As to the orientation of the nest, in pole type A there was no choice for the birds as almost all nesting sites were facing rather north. When this site was found reversed because of the pole position, as it occurred in a few cases, the birds nested facing south. In pole type C where sites were handy on both sides of the pole, except in one case (in which both sides possessed nest), all were facing rather south. Whether this was because of the greater site area obtainable on the south side or to escape from the afternoon sun and north wind is not clear.

No other birds were found to compete with the Sparrows for nesting in these sites. Although I have not witnessed any enemies to nests or their contents, the possible avian ones in the area are the two residents, the Hooded Crow and the Indian Roller, and a number of passage migrants like different shrikes and birds of prey.

The secure hold afforded by the electric poles of the type A and E helped most of the nests in these poles to be rather intact even in winter. While those in less secure situations as in pole type C and among the lines were lost in winter. After the breeding season the Sparrows apparently deserted those sites which lost nests, while frequented many of those sites with nests even in winter.

The possible harmful side effects of the House Sparrow nesting on electric poles are : 1. In the rainy season

(November to April) the wet nest material hanging down can cause short circuit in the wind, and 2. The wet nesting material holding water can in the long run corrode the pole making it a potential danger. The House Sparrow nesting can best be discouraged by selecting poles of type B and C for electric lines.

On contacting D. Summers-Smith regarding the utilization of exposed metal poles for nesting by the House Sparrow he replied me that he has not seen it in all the countries in which he had watched House Sparrows, these include most European and north African countries, Iran, Afghanistan, Pakistan and Sri Lanka in Asia, and the USA and Canada. He has however seen House Sparrows using street lights in the UK, Iran and Sri Lanka, but these were where there was suitable access because of holes or broken glass, so that the nest site differed little from the normal type of hole site used. He informs me further that the nearest thing that might be of interest is the use of pre-cast concrete power cable poles by Spanish Sparrows in Malta. This is quite common there, but of course the poles are honeycombed with suitable nesting sites.

SUMMARY

Results of the survey on the incidence of the House Sparrow nesting on metal poles (electric and telegraph) in semi-arid area of south Iraq for a distance of 50 km. together with the monthly occupation round the year of the most commonly used nesting pole are presented and discussed.

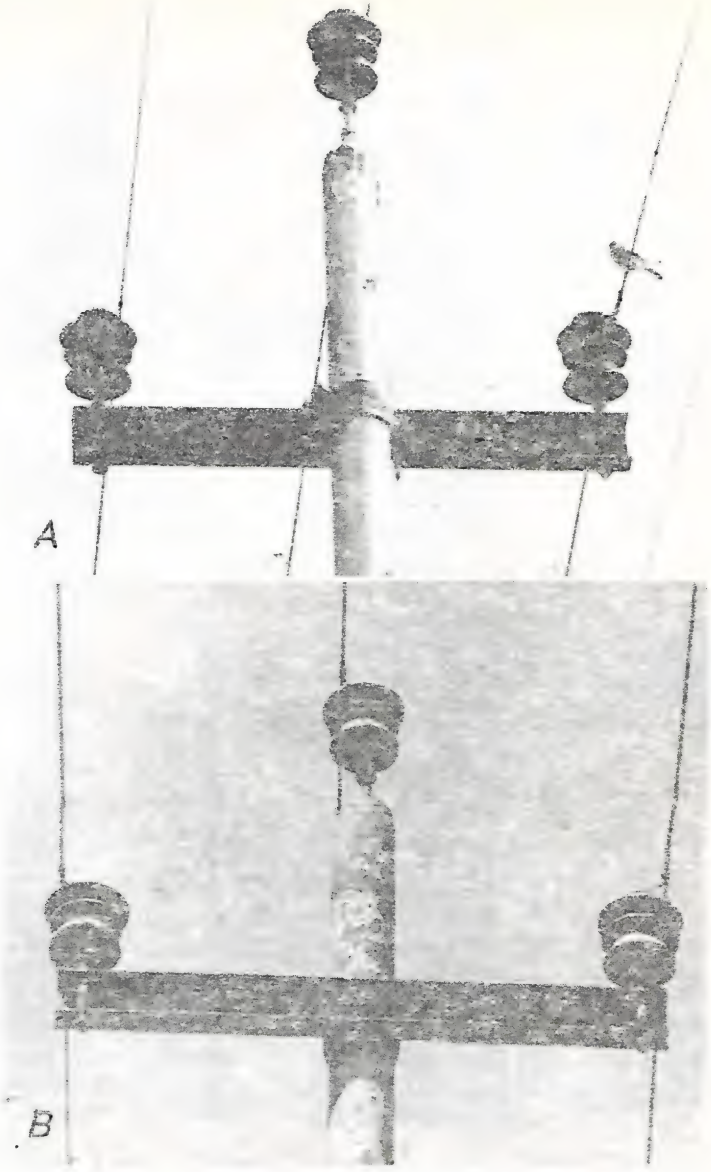

Fig. 5. Electric pole type A and B. Both types were similar but for the fixture of the cross arm. Type A was extensively used for nesting while none of the type B contained nest for lack of hold for nest material.

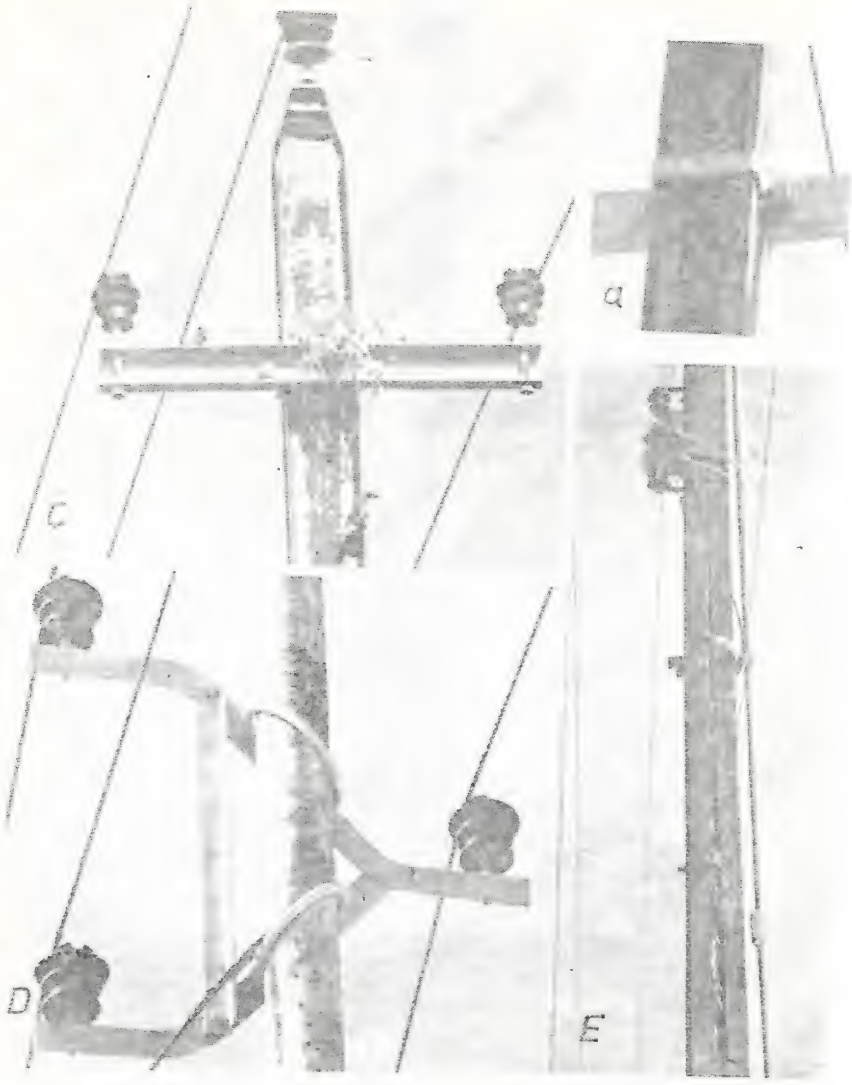

Fig. 6. Electric pole type C, D, and E. a : the other side of type C. Type C had the nests always in the south side. Type D did not furnish any hold hence no nest was present except in one case. Invariably all the E type poles contained nests varying in number one to six.

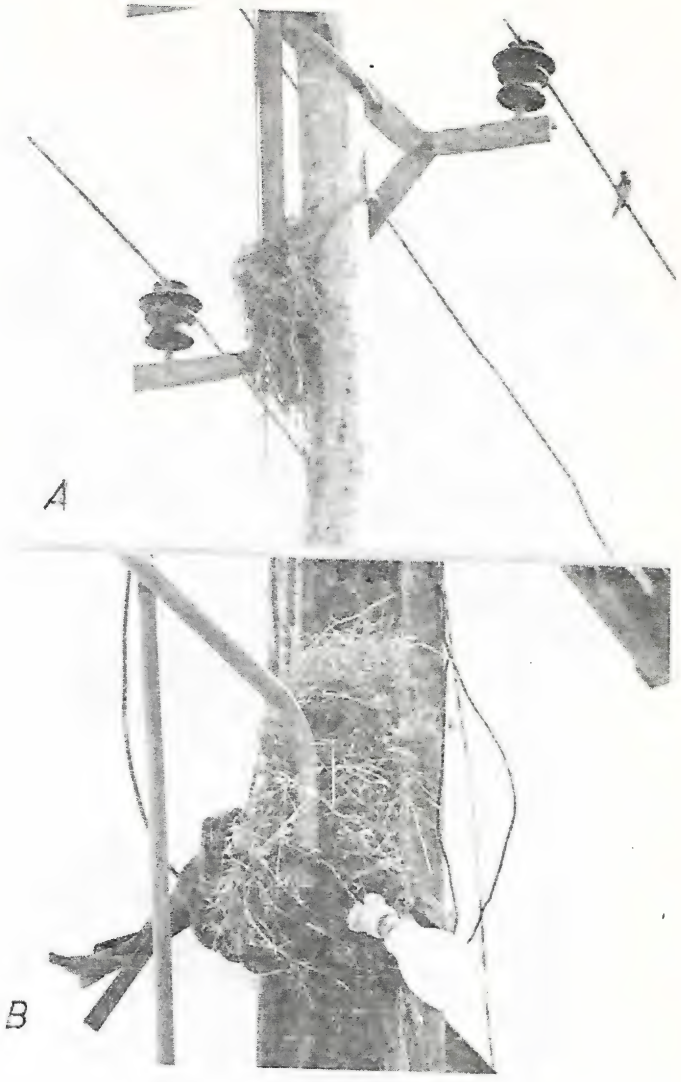

Fig. 7. A. The only nest attempted in C type ; this nest was soon dislodged by wind. B. Nest in between pole and lamp support.

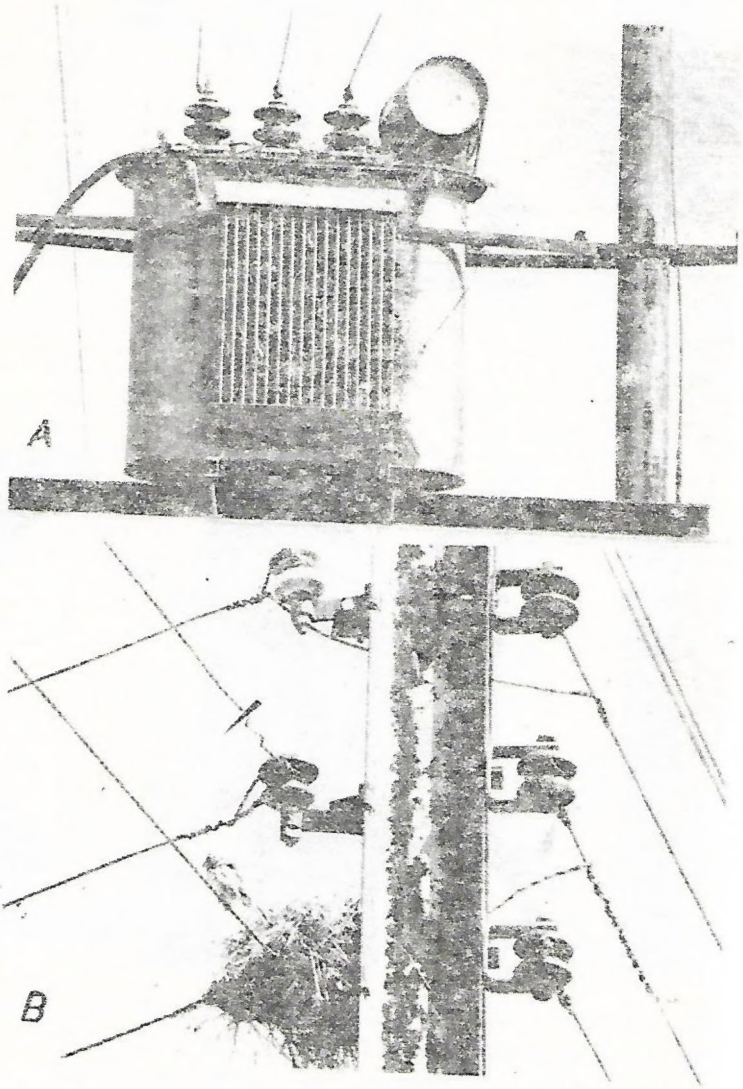

Fig. 8. Nest in the transformer (A) and on the side line (B).

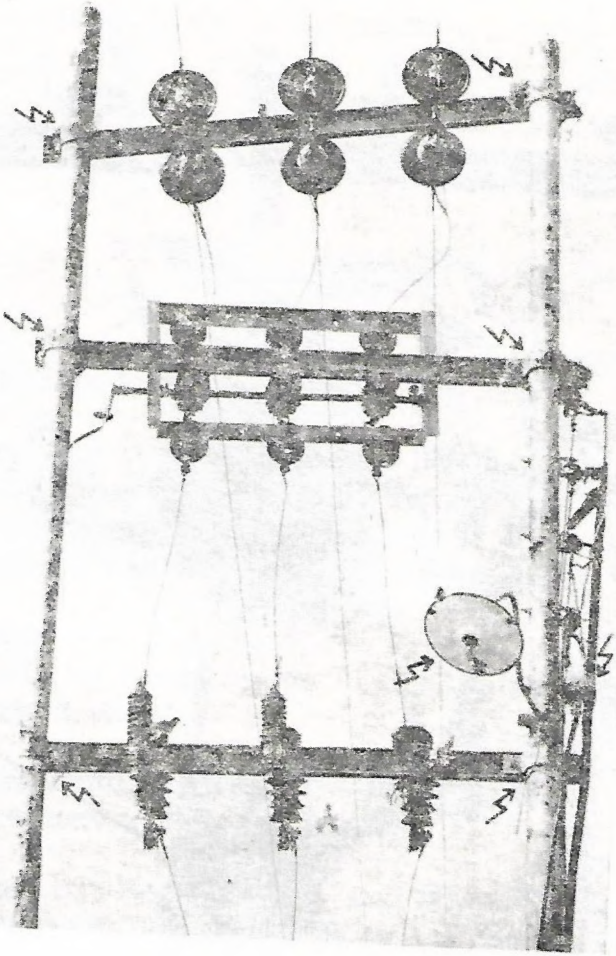

Fig. 9. Any hold on the electric poles were utilized for nesting ; arrows indicate the position of nests. Also note nest in the lamp shade.

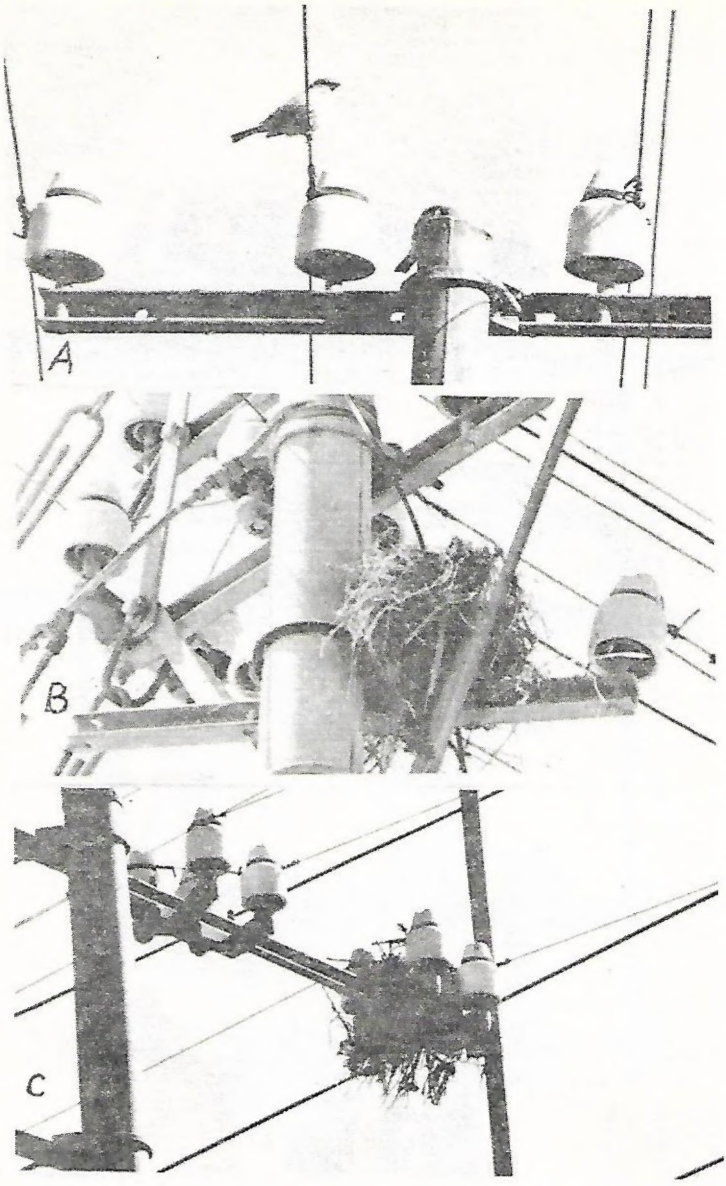

Fig. 10. Nests on telegraph poles : The most commonly used site was the tube of the pole which lacked a cap (A), the next place was among the lines either close to pole (B) or on the cross arm (C).

الخلاصـــة

دراسة عامة عن مدى تعشيش العصفور الدوري على الاعمدة المعدنية (الاعمدة الكهربائية والتلغرافية) في منطقة شبه جافة في جنوب العراق وذلك لمسافة ٥٠ كم ، والدراسة كانت شهرية ولمدة عام واحد وبينت أيضا تفضيل الطائر لانواع معينة من الاعمدة المعدنية دون سواها ..

REFERENCES

Allouse, B. E. 1962. Birds of Iraq. vol. 3 (in Arabic). Ar-Rābitta Press, Baghdad.

Kainady, P. V. G. 1977. Successful hatching of a clutch of the House Sparrow in the absence of the female parent during the second half of incubation. Bull. Basrah nat. Hist. Mus. vol. 4 : 85-86.

Lyubojevic, V. and Al-Doori, M. J. 1972. Climatological data for power projects in Iraq. Ministry of Industry, Baghdad.

Summers-Smith, D. 1967. The House Sparrow. Collins, London.

Ticehurst, C. B., Buxton, P. A. and Cheesman, R. E. 1921. The birds of Mesopotamia Pt. I. J. Bombay nat. Hist. Soc. 28 (1) : 210-250.

Ticehurst, C. B., Cox, P. Z. and Cheesman, R. E. 1926. Additional notes on the avifauna of Iraq. *Ibid* 31 (1) : 91-119.